

while on the inner one the entrance to the large cavity was closed by an apparently stout membrane.

In other specimens which I examined, sometimes neither of the mammæ were perforated; at others one would be slightly open, while the opposite one was entirely closed. Whether the curious conformation of these parts is the result of accident occurring at the moment of the withdrawal of the leech from the young and tender cocoon, or whether it arises from a vital action inherent in this body and essential to the opening of this organ and the consequent liberation of the young contained within it, it is difficult to conjecture; but I am inclined to believe in the latter idea, and more especially so, as in by far the greater number that I have examined no perforation existed, although, from Dr. Johnson's account of other species, this is evidently the point at which the young effect their liberation.

XLIII.—Description of three new species of *Rubus*.

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1. *Rubus tenuis*. Caule procumbente, tereti, subglauco aculeis æqualibus, foliis ternatis, rarius quinatis, supra subglabris, subtus pubescentibus; foliolis obovato-acuminatis, duplo serratis; lateraliibus extrorsum lobatis; panicula decomposita, rarius cymosa; calycibus pubescentibus, lanceolatis acuminatis, fructui adpressis; fructu parvo, nigro, drupeolis paucis, magnis composito.

Var. β. ferox, aculeis crebris, uncinatis.

Syn. *Rubus affinis* δ. *W. et N. Rubi Germ.* p. 3. tab. 3 b. *Rubi cæsi* et *R. corylifolii* pars *auct. var.*

Hab. in variis locis in Britannia australi. *Var. β.* hab. ad "Apes Down" in Insula Vecte.

The habit of this bramble comes so near to that of *Rubus cæsius*, that there can be little doubt it may be often overlooked as being the ordinary dewberry; it is however readily distinguished from that species by the absence of glands generally, and by the absence of both glands and hairs from the growing shoot, and also by the berry being black instead of blue as in the true *R. cæsius*; the calyx embraces it precisely as in that species, but the sepals are rather more broadly lanceolate. The flavour of the fruit differs considerably, that of *R. tenuis*, though acid like that of *R. cæsius*, not having the peculiarly grateful lemon flavour of that species. *Rubus affinis* (*W. et N.*) is described in the 'Rubi Germanici' as having the calyx reflexed, yet one of the varieties is figured with the calyx embracing the fruit. As this is the principal character which distinguishes the present species from *R. affinis*, I can entertain no doubt that the variety (δ.) there figured is in fact the one now described as a distinct species. It holds a near affinity both with *R. cæsius* and *R. affinis*, but having

closely observed it for many years, I am satisfied of its distinctness, and have no doubt that the characters now given will be found sufficient for it to be readily known. I have already found it in Dorsetshire, Wiltshire and Hampshire, including the Isle of Wight.

Var. β. is a somewhat stouter plant, and very much more prickly. It appears to be far less common, being hitherto only observed in the Isle of Wight, at Apes Down near the Farm.

2. *Rubus Borreri*. Caule procumbente, tereti, aculeato, pilis patentibus hirtis; aculeis crebris, longis, tenuibus uncinatis; foliis quinatis, obovato-cuneatis, supra subglabris, subtus hirtis concoloribus; panicula corymbosa, ramis inferioribus longis, decompositis, superioribus brevioribus, flore terminali subsessili; aculeis paniculae paucis, pedunculis pubescenti-hirtis; bracteis lanceolatis, hirtis, inferioribus ternatis aut dentatis, superioribus simplicibus; calycibus ovato-lanceolatis, longe acuminatis, pubescenti-hirtis, fructum laxe amplectentibus; fructu nigro, hemisphaerico, parvis nitidis drupeolis composito.

Hab. in Insula Vecte.

This species is one most readily distinguished from any other. It is a creeping plant of considerable length. Its nearest affinities are with the *R. villicaulis* and *R. sylvaticus* of Weihe and Nees, two forms very rightly considered as mere varieties of the same species by Mr. Babington*: the nature of the hairiness of the stem and the form of the thorns, together with a principal character of the leaves, which are hairy, yet deep green beneath, associate it very nearly with those forms; the stem however is both more thorny and more hairy, and the leaves more slender. The characters by which it is distinguished from all to which it is allied are to be found in the parts of inflorescence and fructification. The arrangement of the corymbose panicle as described above gives the plant a very remarkable appearance, and at first sight separates it widely from *R. villicaulis* and its varieties, the panicles of which are slender and tapering. The fruit and calyx present still better discriminating characters. The hemispherical form of the fruit and the clasping calyx distinguish it entirely from all the other species allied to it.

The fruit is of a remarkably bright jetty appearance when ripe, but prior to that it has a peculiar opake flesh tint; this last character was pointed out to me by my friend Mr. Borrer, who was with me on the third occasion of my observing this plant. In acknowledgement of his successful labours in this genus, and of his assistance in discriminating the present species, I have adopted for it his name.

* Manual of British Botany, p. 95.

Except in a few spots in the Isle of Wight, I have never yet noticed this species.

3. *Rubus Babingtonii*. Caule arcuato, tereti, sulcato, hispido ex aculeis, et aciculis crebris in setas ineuntibus, sparsim glanduloso; foliis ternatis, rarius quinatis; foliolis supra glabris, subtus parce pubescentibus, rhomboido-cordatis, cuspidatis, duplo et inæqualiter mucronato- et crenato-serratis; stipulis linearibus, pubescentibus; panicula foliosa, multum ramosa, versus terram ut surculo induta, supra tomentosa, aculeata, setosa; foliis paniculæ ternatis vel simplicibus, inæqualiter mucronato-crenatis; bracteis foliaceis, late lanceolatis, pilosis glandulosis; calycibus lanceolatis cuspidatis, pilosis.

Hab. ad Selborne prope Week-hill.

This is one of the most remarkable of the genus which I have yet met with. It is a bramble of extraordinary size, and I regret not having measured a growing shoot, that I might give its dimensions; the panicle is more than 2 feet in length. It is a matter of difficulty to settle with which of our previous species it would most naturally be grouped. Its prickly inflorescence, accompanied with glands, would associate it with the *Koehleri* group, while the very tomentose clothing of this part would more nearly associate it with *R. leucostachys*, from which however the presence of glands at once separates it. The hispid shoot however is that which best marks its true affinity, which must, I conclude, be with the *Rudis* group, from all of which however it is distinguished by the leaves, though slightly pubescent, being green beneath, and ternate instead of quinately. The peculiar margin of the leaves, which are mucronato-crenate, or as Mr. Babington* more minutely specifies it, "serrato-apiculate towards the base, and higher up crenato-dentato-apiculate," at once distinguishes it, not only from the jagged-leaved species of the *Rudis* group, but from all other of our fruticose *Rubi*, while the existence of ternate leaves on a bramble of such dimensions adds to the peculiarity of its appearance. The shoot, though described above as sulcate, is not angular, the margins of the grooves being rounded. Notwithstanding the size of the panicle, the fruit itself is remarkably small.

I have named this species after my friend Mr. Charles C. Babington, the learned author of the 'Manual of British Botany,' in acknowledgement not only of his assistance in discriminating its characters, but of his successful labours, as well in this as in so many other difficult genera, and indeed in the whole British flora.

* In a letter to the author of these remarks.